# Sophia Cofone

**Portfolio:** sophiacofone.github.io/portfolio/ | **GitHub:** github.com/sophiacofone | **Linkedin:** linkedin.com/in/sophia-cofone/
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## PROFESSIONAL SUMMARY

Data Science graduate student with a strong background in data visualization and business administration, complemented by experience in machine learning, statistical analysis, web development, and database management.

## EDUCATION

**Northeastern University - Khoury College of Computer Sciences**, Roux Institute - Portland, ME
*Masters of Science in Data Science Candidate*, GPA 3.9/4.0                      *Expected August 2023*
*Coursework:* Discrete Mathematics, Linear Algebra and Probability, Algorithms, Statistical Learning, Machine Learning

**University of Massachusetts Amherst - Isenberg School of Management**, Amherst, MA
*Bachelor of Business Administration in Accounting (Minor: Philosophy)*, GPA 3.9/4.0      *Graduated Spring 2020*

## TECHNICAL SKILLS

**Programming:** Python (sci-kit learn, numpy, and pandas), R, Javascript • **Data visualization:** Matplotlib, Seaborn, D3.js, Tableau • **Machine Learning:** unsupervised, supervised • **Database Management:** SQLite, MySQL, data warehousing, data mining • **Full-stack web development:** React.js, Node.js, MongoDB, Bootstrap, CSS, Redux, HTML, APIs

## HIGHLIGHTED PROJECTS

**Supervised ML applied to Adult vs Baby Face Classification**          *November - December 2022*
*Northeastern University -* ds5110.github.io/faces/ • github.com/ds5110/faces
- Built and trained supervised machine learning classification models (logistic regression, K-nearest-neighbors)
- Calculated euclidean distances for feature engineering, selected resampling methods, and applied cross-validated feature selection improving model accuracy and recall scores by over 20%
- Produced visualizations demonstrating hyperparameter tuning and model results via confusion matrices

**Building relational databases and data warehouses using MySQL**          *Spring 2023*
*Northeastern University -* github.com/sophiacofone/bird_relational_db • github.com/sophiacofone/pub_warehouse
- Designed and built relational databases using MySQL and SQLite, ensuring data cleanliness and normalization.
- Integrated multiple databases into a data warehouse, constructing fact tables to allow efficient querying and analysis.
- Leveraged R programming language to extract, transform, and load data from XML and CSV sources, employing optimization techniques such as hash tables for over 10x improved performance.

**SoundSynergy: React web application**          *Spring 2023*
*Northeastern University -* github.com/sophiacofone/soundsynergy-react-app
- Built a feature-rich web application using React.js, Node.js, MongoDB, Bootstrap, Redux, JavaScript and Spotify's public API supporting multi-user authentication, social features (friend requests, follow/follower system, and content sharing), and profile features (creation, editing, and tracking of liked songs, artists, and albums).
- Introduced a content recommendation system that suggests friends likely to enjoy specific music based on their profile

## WORK EXPERIENCE

**Omnic Data, Inc. | AI Esports Coach**, Brunswick, ME          *May 2022 - September 2022*
*Software Assist*
- Created interactive, user-customizable data visualization histograms, line charts, dendrograms, and heatmaps (using Javascript, Ruby, D3.js, HTML, CSS), to present key gameplay statistics derived from raw user data.
- Implemented visualizations into web application, including the creation of views, controllers, and database queries using Ruby and ActiveRecord
- Built data pipelines in javascript to transform raw data to a usable form for specific visualization applications.
- Customized the level of detail shown in the visuals to improve data clarity for beginner and advanced users.

**PricewaterhouseCoopers**, Boston, MA          *September 2020 - June 2021*
*Experienced Associate - ESG (Environmental, Social, Governance) & Process Assurance*
- Developed and designed a company's ESG metrics to represent the company's stakeholder concerns and to ensure their compliance with ESG standards and rating agency methods.
- Owned the creation, documentation, and testing of new IT controls such as database access reviews.